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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,361	01/05/2001	Syouji Ohtsuka	2257-0172P	3333

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EXAMINER
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MCCARTNEY, LINZY T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/754,361	Applicant(s) OHTSUKA ET AL.	
	Examiner Linzy McCartney	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,313,816 to Kojima et al. (Kojima) in view of U.S. Patent No. 5,452,019 to Fukuda et al. (Fukuda).

- a. Referring to claim 1, Kojima discloses a light emitting portion for emitting a display light (Fig. 3) and a chromaticity converter portion receiving image data and said chromaticity conversion parameter, for converting chromaticity of said image data on the basis of said chromaticity conversion parameter (column 2, lines 62-65; column 3, lines 40-44). Kojima does not explicitly disclose a memory portion for storing display characteristics information of said light emitting portion and further storing a chromaticity conversion parameter obtained on the basis of said stored display characteristics information. Fukuda discloses a memory portion for storing display characteristics information of said light emitting portion (column 10, lines 64-68) and further storing a chromaticity conversion parameter obtained on the basis of said stored display characteristics information (column 11, lines 48-54). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the apparatus of Kojima by including a memory portion storing display characteristics

information and storing a chromaticity conversion parameter obtained on the basis of said stored display characteristics information as taught by Fukuda. The suggestion/motivation for doing so would have been because it would inhibit dispersed distribution on the display and therefore it would be possible to obtain a projected image free from unevenness (Fukuda, column 20, lines 36-40).

3. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Fukuda as applied to claim 1 above further in view of U.S. Patent No. 6,243,059 to Greene et al. (Greene).

a. Referring to claim 2, Kojima discloses an operation portion receiving chromaticity range information (column 8, lines 27-37) on a predetermined chromaticity range common to said plurality of display units constituting said display portion (column 6, lines 18-21 and 56-66; Fig. 4) for obtaining said chromaticity conversion parameter on the basis of said chromaticity range information and said display characteristic information (column 8, lines 39-47; column 3, lines 12-18) Kojima does not explicitly disclose the operation portion receives display characteristics information. Greene discloses the operation portion receives display characteristics information (column 13, lines 12-16). At the time the invention was made, it would have been obvious to one of ordinary skill to further modify the apparatus of Kojima by having the operation portion receive display characteristics information as taught by Greene. The suggestion/motivation for doing so would have been because it would allow the computation of the color gamut (Greene, column 13, lines 14-16).

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b. Referring to claim 3, Kojima discloses light emitting portion is divided into a plurality of blocks (column 2, lines 50-60; Fig. 1); information includes information on each of said plurality of blocks (column 3, lines 12-19); said chromaticity converter portion converts chromaticity of said image data for each of said plurality of blocks on the basis of said chromaticity conversion parameter for each of said plurality of blocks (column 3, lines 12-18).

c. Referring to claim 4, Kojima discloses an operation portion receiving chromaticity range information on a predetermined chromaticity range (column 8, lines 27-37) including a chromaticity range common to said plurality of display units constituting said display portion (column 6, lines 18-21 and 56-66; Fig. 4) for obtaining said chromaticity conversion parameter for each of said plurality of blocks on the basis of said chromaticity range information and said display characteristics information on each of said plurality of blocks (column 3, lines 12-18; column 7, lines 38-41). Kojima does not explicitly disclose the operation portion receives display characteristics information on each of said blocks. Greene discloses the operation portion receives display characteristics information on each of said blocks (column 13, lines 7-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the apparatus of Kojima by having the operation portion receive display characteristics information on each of said blocks as taught by Greene. The suggestion/motivation for doing so would have been because it would allow the computation of the color gamut (Greene, column 13, lines 14-16).

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4. Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Greene further in view of U.S. Patent No. 6,219,011 to Aloni et al. (Aloni).

a. Referring to claim 6, Kojima discloses each of said plurality of display units having a light emitting portion for emitting a display light (Fig. 1; column 2, lines 50-60) and said display control device comprising a chromaticity determination portion for determining a predetermined chromaticity range including a chromaticity range common to said plurality of display units on the basis of all said display characteristics information (column 6, lines 18-21 and 56-66; Fig. 4). Kojima also discloses providing a correcting circuit for each block (column 7, lines 38-41). Kojima does not explicitly disclose each of said plurality of display units storing information including display characteristics information of said light emitting portion; said display control device being provided outside said plurality of display units interactively communicably therewith; receiving said display characteristics information from each of said plurality of display units. Greene discloses receiving said display characteristics information from each of said plurality of display units and storing information including display characteristics information of said light emitting portion for a color correction circuit (column 13, lines 12-16). Aloni discloses said display control device being provided outside said plurality of display units interactively communicably therewith (Fig. 2). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the apparatus of Kojima by receiving said display characteristics information from each of said plurality of display units and storing information including display characteristics information of said light emitting portion for a color correction circuit and display control device being

provided outside said plurality of display units and interactively communicably therewith as taught by Greene and Aloni. The suggestion/motivation for doing so would have been because it would allow the computation of the color gamut (Greene, column 13, lines 14-16) and because it would allow one device to control all the modular units (Aloni, column 8, lines 39-43).

b. Referring to claim 7, Kojima discloses an operation portion receiving chromaticity range information on said predetermined chromaticity range (column 8, lines 27-37) and obtaining a chromaticity conversion parameter for each of said plurality of display units on the basis of said chromaticity range information and said display characteristics information (column 3, lines 12-18; column 7, lines 38-41). Kojima does not explicitly disclose the operation portion receives display characteristics information on each of said blocks. Greene discloses the operation portion receives display characteristics information on each of said blocks (column 13, lines 7-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the computation of the color gamut (Greene, column 13, lines 14-16).

c. Referring to claim 8, Kojima discloses light emitting portion is divided into a plurality of blocks (column 2, lines 50-60; Fig. 1); information includes information on each of said plurality of blocks (column 3, lines 12-19); said chromaticity converter portion determines a chromaticity range including a chromaticity range common to all said plurality of blocks of said plurality of display units as said predetermined

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chromaticity range on the basis of said display characteristics information of all said plurality of blocks (column 3, lines 12-18; column 7, lines 38-41; column 8, lines 27-37; Fig. 4).

d. Referring to claim 9, Kojima discloses an operation portion receiving chromaticity range information on said predetermined chromaticity range (column 8, lines 27-37) for obtaining said chromaticity conversion parameter for each of said plurality of blocks on the basis of said chromaticity range information and said display characteristics information on each of said plurality of blocks (column 3, lines 12-18; column 7, lines 38-41). Kojima does not explicitly disclose the operation portion receives display characteristics information on each of said blocks. Greene discloses the operation portion receives display characteristics information on each of said blocks (column 13, lines 7-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the computation of the color gamut (Greene, column 13, lines 14-16).

e. Referring to claim 10, Kojima discloses a display portion constituted of a plurality of display units which are arranged (column 2, lines 50-60); and an operation portion (Fig. 3), wherein each of said plurality of display units comprises: a light emitting portion for emitting a display light (Fig. 3); said display control device comprises: a chromaticity range determination portion, for determining a predetermined chromaticity range including a chromaticity range common to said plurality of display units on the basis of all said display characteristics information (column 6, lines 18-21 and 56-66; Fig. 4;



column 8, lines 27-37), and said operation portion receives chromaticity range information on said predetermined chromaticity range for obtaining said chromaticity conversion parameter for each of said plurality of display units on the basis of said chromaticity range information and said display characteristics information (column 6, lines 18-21 and 56-66; Fig. 4; column 8, lines 27-37). Kojima does not explicitly disclose that each of the plurality of display units comprises a memory portion for storing information including display characteristics information of said light emitting portion and a chromaticity conversion parameter obtained on the basis of said display characteristics information or a chromaticity converter portion receiving image data and said chromaticity conversion parameter, for converting chromaticity of said image data on the basis of said chromaticity conversion parameter; nor does Kojima disclose receiving said display characteristics information from each of said plurality of display units or a display control device provided outside said plurality of display units interactively communicably therewith, for controlling display of said plurality of display units. Greene discloses receiving display characteristics information from each of said plurality of display units (column 13, lines 7-16) and memory portion for storing information including display characteristics information of said light emitting portion (column 13, lines 7-16) and a chromaticity conversion parameter obtained on the basis of said display characteristics information (column 13, lines 16-24) and a chromaticity converter portion receiving image data and said chromaticity conversion parameter, for converting chromaticity of said image data on the basis of said chromaticity conversion parameter (Fig. 6). Aloni discloses said display control device being provided outside

said plurality of display units interactively communicably therewith (Fig. 2). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene and Aloni. The suggestion/motivation for doing so would have been because it would allow the design and manufacture of monolithic and tiled displays of superior uniformity (Greene, column 4, lines 39-44) and because it would allow one device to control all the modular units (Aloni, column 8, lines 39-43).

f. Referring to claim 11, Kojima discloses said operation portion is inside said display control device (Fig. 3). Kojima does not explicitly disclose the display control device transmits said chromaticity conversion parameter obtained in said operation portion to corresponding one of said plurality of display units. Greene discloses transmitting said chromaticity conversion parameter obtained in the operation portion to corresponding one said plurality of display units (Fig. 7; column 12, 31-42; column 13, lines 12-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the design and manufacture of monolithic and tiled displays of superior uniformity (Greene, column 4, lines 39-44).

g. Referring to claim 12, Kojima discloses said light emitting portion of each of said plurality of display units is divided into a plurality of blocks (column 2, lines 50-60); said information includes information on each of said plurality of blocks (column 3, lines 12-19); said chromaticity converter portion of each of said plurality of display units converts

chromaticity of said image data of each of said blocks on the basis of said chromaticity conversion parameter for each of said plurality of blocks (column 3, lines 12-18); said chromaticity range determination portion of said display control device determines a chromaticity range including a chromaticity range common to said plurality of blocks of said plurality of display units as said predetermined chromaticity range on the basis of said display characteristics information of all the plurality of blocks (column 6, lines 18-21 and 56-66; Fig. 4; column 8, lines 27-37); said operation portion provided inside said display control device (Fig. 3) receives chromaticity range information on said predetermined chromaticity range for obtaining said chromaticity conversion parameter for each of said plurality of blocks on the basis of said chromaticity range information and said display characteristics information on each of said plurality of blocks (column 6, lines 18-21 and 56-66; Fig. 4; column 8, lines 27-37). Kojima does not explicitly disclose receiving display characteristics information on each of said plurality of blocks. Greene discloses receiving display characteristics information on each of said plurality of blocks (column 13, lines 7-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the design and manufacture of monolithic and tiled displays of superior uniformity (Greene, column 4, lines 39-44).

h. Referring to claim 13, Kojima does not explicitly disclose a plurality of operation portions, each of said plurality of operation portions is provided inside each of said plurality of display units or said display control device transmits said chromaticity range

information to said each of said plurality of display units. Greene discloses a plurality of operation portions, each of said plurality of operation portions is provided inside each of said plurality of display units (Fig. 7) and said display control device transmits said chromaticity range information to said each of said plurality of display units (Fig. 7; column 12, 31-42; column 13, lines 12-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the design and manufacture of monolithic and tiled displays of superior uniformity (Greene, column 4, lines 39-44).

i. Referring to claim 14, Kojima discloses said light emitting portion of each of said plurality of display units is divided into a plurality of blocks (column 2, lines 50-60); said information includes information on each of said plurality of blocks (column 3, lines 12-19); said chromaticity converter portion of each of said plurality of display units converts chromaticity of said image data of each of said blocks on the basis of said chromaticity conversion parameter for each of said plurality of blocks (column 3, lines 12-18); said chromaticity range determination portion of said display control device determines a chromaticity range including a chromaticity range common to said plurality of blocks of said plurality of display units as said predetermined chromaticity range on the basis of said display characteristics information of all the plurality of blocks (column 6, lines 18-21 and 56-66; Fig. 4; column 8, lines 27-37); said operation portion provided inside said display control device (Fig. 3) receives chromaticity range information on said predetermined chromaticity range for obtaining said chromaticity conversion parameter

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for each of said plurality of blocks on the basis of said chromaticity range information and said display characteristics information on each of said plurality of blocks (column 6, lines 18-21 and 56-66; Fig. 4; column 8, lines 27-37). Kojima does not explicitly disclose receiving display characteristics information on each of said plurality of blocks. Greene discloses receiving display characteristics information on each of said plurality of blocks (column 13, lines 7-16). At the time the invention was made, it would have been obvious to one of ordinary skill to modify the teachings of Kojima with the teachings of Greene. The suggestion/motivation for doing so would have been because it would allow the design and manufacture of monolithic and tiled displays of superior uniformity (Greene, column 4, lines 39-44).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Fukuda as applied to claim 1 above further in view of U.S. Patent No. 6,493,008 to Yui.

a. Referring to claim 5, the modified apparatus of Kojima as applied above meets the limitations recited in claim 5 except a received-signal processing portion receiving a mixed signal in which a plurality of signals including said image data are mixed, for separating said mixed signal into said plurality of signals. Yui discloses the aforementioned limitation (column 6, lines 43-54). At the time the invention was made, it would have been obvious to one of ordinary skill to further modify the teachings of Kojima with the teachings of Yui. The suggestion/motivation for doing so would have been because it would allow the simultaneous display of image data inputted from a plurality of image sources on a display unit (Yui, column 1, lines 8-11).

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**. The examiner can normally be reached on Mon-Friday (8:00AM-5:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

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**Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).**

**Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service**

**Office whose telephone number is (703) 306-0377.**

ltm  
October 17, 2003



MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600